

CLAIMS

1. A vacuum processing apparatus comprising a pressure-reduction container, exhaust means joined to said pressure-reduction container, and a processing object introducing door connected to said pressure-reduction
5 container through a gasket, said vacuum processing apparatus characterized in that one or more gaskets including said gasket of said processing object introducing door are made of a material with a small emission of organic matter.
2. A vacuum processing apparatus according to claim 1, characterized in that the constituent material of said gasket contains organic matter.
- 10 3. A vacuum processing apparatus according to claim 2, characterized in that the constituent material of said gasket has been subjected to a process of contacting it with water at 80°C or more.
4. A vacuum processing apparatus according to claim 2 or 3, characterized in that a main component of said organic matter is a
15 perfluoroelastomer.
5. A vacuum processing apparatus comprising a pressure-reduction container, exhaust means connected to said pressure-reduction container, a processing object introducing door connected to said pressure-reduction container, and a plurality of gaskets for ensuring airtightness of said
20 pressure-reduction container, said vacuum processing apparatus characterized in that a constituent material of the gasket, in said plurality of gaskets, for ensuring airtightness of a portion with low attach/detach frequency is at least one of a metal, a ceramic, and organic matter.
6. A vacuum processing apparatus according to claim 5, characterized
25 in that a constituent material of the gasket for ensuring airtightness of a portion with high attach/detach frequency contains organic matter.
7. A vacuum processing apparatus according to claim 6, characterized in that at least one or more of the gaskets containing the organic matter have

been subjected to a process of contacting them with water at 80°C or more.

8. A vacuum processing apparatus according to claim 6 or 7, characterized in that a main component of said organic matter is a perfluoroelastomer.

5 9. A vacuum processing apparatus according to any one of claims 1 to 8, characterized in that said exhaust means comprises a pump and causes a small amount of an inert gas to flow upstream of said pump or at a pump purge portion.

10 10. A vacuum processing apparatus according to any one of claims 1 to 8, characterized in that said exhaust means comprises a primary pump, a secondary pump connected to an exhaust side of said primary pump, and a gas introducing portion for introducing an inert gas between said primary pump and said secondary pump.

15 11. A vacuum processing apparatus according to any one of claims 1 to 10, characterized in that a degree of vacuum at the time of treatment is 100 Torr or less.

 12. A vacuum processing apparatus according to any one of claims 1 to 11, characterized in that said vacuum processing apparatus is a reduced-pressure processing apparatus.

20 13. A vacuum processing apparatus according to any one of claims 1 to 11, characterized in that said vacuum processing apparatus is a vapor deposition apparatus.

 14. A vapor deposition apparatus comprising a pressure-reduction container, exhaust means connected to said pressure-reduction container, a substrate introducing door connected to said pressure-reduction container, a plurality of gaskets for ensuring airtightness of said pressure-reduction container, and a deposition source container, said vapor deposition apparatus characterized in that a constituent material of the gasket, in said plurality of

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gaskets, for ensuring airtightness of a portion with low attach/detach frequency is at least one of a metal and a ceramic.

15 15. A vapor deposition apparatus according to claim 14, characterized in that a constituent material of the gasket for ensuring airtightness of a portion with high attach/detach frequency contains organic matter.

16. A vapor deposition apparatus according to claim 15, characterized in that said gasket containing the organic matter has been subjected to a process of contacting it with water at 80°C or more.

10 17. A vapor deposition apparatus according to claim 15 or 16, characterized in that a main component of said organic matter is a perfluoroelastomer.

18. A vapor deposition apparatus according to claim 15, characterized in that said deposition source container is made of a material with low catalytic properties.

15 19. A vapor deposition apparatus according to claim 18, characterized in that an inner surface of said deposition source container contains at least one of an oxide or a nitride of an element selected from Si, Cr, Al, La, Y, Ta, Ti, and B, or C.

20 20. A vapor deposition apparatus according to claim 15, characterized in that said deposition source container is made of a high thermal conductivity material.

21. A vapor deposition apparatus according to claim 20, characterized in that said high thermal conductivity material forming said deposition source container contains at least one of a nitride of Al, B, or Si, C or a metal material.

25 22. A vapor deposition apparatus according to claim 21, characterized in that an inner surface of said deposition source container contains at least one of an oxide or a nitride of an element selected from Si, Cr, Al, La, Y, Ta, Ti, and B, or C.

23. A vapor deposition apparatus according to any one of claims 18 to 22, characterized in that the inner surface of said deposition source container is substantially smooth.

5 24. A vapor deposition apparatus according to any one of claims 14 to 23, characterized in that a deposition material put into said deposition source container is an organic EL element material.

25. A vapor deposition apparatus according to any one of claims 14 to 24, characterized in that said exhaust means comprises a pump and causes a small amount of an inert gas to flow upstream of said pump or at a pump purge
10 portion.

26. A vapor deposition apparatus according to any one of claims 14 to 24, characterized in that said exhaust means comprises a primary pump, a secondary pump connected to a discharge side of said primary pump, and a gas introducing portion for introducing an inert gas between said primary pump
15 and said secondary pump.

27. A vapor deposition apparatus according to any one of claims 14 to 24, characterized in that a degree of vacuum at the time of treatment is 100 Torr or less.

28. An organic EL element characterized by comprising an organic
20 layer formed by the use of the vapor deposition apparatus according to any one of claims 14 to 27.

29. An organic EL display device characterized by comprising an organic layer formed by the use of the vapor deposition apparatus according to any one of claims 14 to 27.

25 30. A vacuum processing apparatus comprising a plurality of airtight sealing members, said vacuum processing apparatus characterized in that at least one of said plurality of airtight sealing members has been applied with an organic matter emission prevention process.

31. A vacuum processing apparatus according to claim 30, characterized in that the airtight sealing member having been applied with said organic matter emission prevention process is subjected to higher attach/detach frequency as compared with the other airtight sealing member.

- 5 32. A vacuum processing apparatus comprising a plurality of airtight sealing members employed at portions that are detachably used, said vacuum processing apparatus characterized in that, in said plurality of airtight sealing members, the airtight sealing member at the portion with high attach/detach frequency and the airtight sealing member at the portion with low attach/detach
- 10 frequency are made of mutually different materials and said airtight sealing member at said portion with the high attach/detach frequency is made of the material containing a perfluoroelastomer as a main component.